AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A multi-wavelength surface emitting laser for emitting light having a first wavelength and light having a second wavelength, the laser comprising:

a substrate;

a first surface emitting laser which emits light having the first wavelength, directly formed on a portion of an upper surface of the substrate and including,

a first lower reflector formed of two alternately deposited semiconductor material layers having a same type of impurity, but different refractive indices, the first lower reflector disposed on the upper surface of the substrate;

a first active layer disposed on the first lower reflector; and

a first upper reflector formed of two deposited semiconductor material layers having different refractive indices and an opposite type of impurity to that of the first lower reflector, the first upper reflector disposed on the first active layer;

a second surface emitting laser which emits light having the second wavelength, directly formed on a portion of an upper surface of the substrate neighboring the first surface emitting laser and including;

a second lower reflector formed of two alternately deposited semiconductor material layers having different refractive indices and a same type of impurity, the second lower reflector disposed on the upper surface of the substrate;

a second active layer disposed on the second lower reflector; and

a second upper reflector formed of two deposited semiconductor material layers having different refractive indices and an opposite type of impurity to that of the second lower reflector, the second upper reflector disposed on the second active layer;

a lower electrode layer disposed on a lower surface of the substrate;

a first upper electrode formed on the first upper reflector, which electric power is applied to; and

a second upper electrode formed on the second upper reflector, which electric power is applied to~~.~~;

wherein the first and second surface emitting lasers commonly use the substrate and the lower electrode; and

wherein each of the first lower reflector, the first active layer and the first upper reflector of the first surface emitting laser are apart and formed independently from each of the second lower reflector, the second active layer and the second upper reflector of the second surface emitting laser.

2. (Original) The laser as claimed in claim 1, further comprising a first high resistance portion partially formed in the first upper reflector, which limits a flow of current; and

a second high resistance portion partially formed in the second upper reflector, which limits a flow of current.

3. (Withdrawn)

4. (Withdrawn)

5. (Withdrawn)

6. (Currently Amended) A multi-wavelength surface emitting laser for emitting light having a first wavelength and light having a second wavelength, the laser comprising:

a substrate;

a first surface emitting laser which emits light having the first wavelength formed on a first portion of the substrate; and

a second surface emitting laser which emits light having the second wavelength formed on a second portion of the substrate,

wherein the first surface emitting laser includes,

a first lower reflector disposed on the substrate;

C2 a first active layer disposed on the first lower reflector; and

a first upper reflector disposed on the first active layer, and wherein the second surface emitting laser includes,

a second lower reflector disposed on the substrate;

a second active layer disposed on the second lower reflector; and a second upper reflector disposed on the second active layer~~.~~;

wherein the first and second surface emitting lasers commonly use the substrate; and

wherein each of the first lower reflector, the first active layer and the first upper reflector of the first surface emitting laser are apart and formed independently from each of the second lower reflector, the second active layer and the second upper reflector of the second surface emitting laser.

7. (Cancelled)

8. (Previously Amended) The laser as claimed in claim 6, wherein the first lower reflector is formed of two alternately deposited semiconductor material layers having a same type of impurity, but different refractive indices, and the first upper reflector is formed of two deposited semiconductor material layers having different refractive indices and an opposite type of impurity to that of the first lower reflector, and

wherein the second surface emitting laser is formed of two alternately deposited semiconductor material layers having different refractive indices and a same type of impurity, and the second upper reflector is formed of two deposited semiconductor material layers having different refractive indices and an opposite type of impurity to that of the second lower reflector.

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9. (Previously Amended) The laser as claimed in claim 6, further including,

a lower electrode disposed on a lower surface of the substrate;

a first upper electrode formed on the first upper reflector, which electric power is applied to; and

a second upper electrode formed on the second upper reflector, which electric power is applied to.

10. (Original) The laser as claimed in claim 6, wherein the first surface emitting laser and the second surface emitting laser are formed on an upper surface of the substrate, and wherein the first surface emitting laser and the second surface emitting laser neighbor each other.

11. (Withdrawn)

12. (Withdrawn)

13. (Withdrawn)

14. (Withdrawn)

15. (Withdrawn)

16. (Currently Amended) A multi-wavelength surface emitting laser for emitting light having a first wavelength and light having a second wavelength, the laser comprising:

a substrate;

first laser emitting means for emitting a laser having the first wavelength, the first laser emitting means disposed on the substrate; and

second laser emitting means for emitting a laser having the second wavelength, the second laser emitting means disposed on the substrate,

wherein the first laser emitting means includes,

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first laser reflecting means disposed on the substrate; and

first energy transition means for generating a laser beam, the first energy transition means disposed in the first reflecting means, and

wherein the second laser emitting means includes,

second laser reflecting means disposed on the substrate; and

second energy transition means for generating a laser beam, the second energy transition means disposed in the second reflecting means~~.~~;

wherein the first and second laser emitting means commonly use the substrate; and

wherein the first laser reflecting means and the first energy transition means of the first laser emitting means are apart and formed independently from the second laser reflecting means and the second energy transition means of the second laser emitting means.

17. (Cancelled)

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18. (Previously Amended) The laser as claimed in claim 16, further including:

lower electrode means disposed on a lower surface of the substrate;

first upper electrode means for accepting electric power disposed on an upper surface of the first laser reflecting means; and

second upper electrode means for accepting electric power disposed on an upper surface of the second laser reflecting means.